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AUTHOR Haynes, Norris M.; And Others
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ABSTRACT

This report summarizes the results of research conducted in the Benton Harbor Area Schools (Michigan) during 1985 and 1986, to measure the sustained impact of the School Development Program (SDP), which aimed to increase school effectiveness. The study sample included a total of 313 students in kindergarten through grade five who attended 14 elementary schools, including 7 SDP schools, 4 non-program schools, and 3 special schools with specially designed extracurricular activities. All schools were located in low socioeconomic status areas, but the students attending SDP schools were lower achieving and had more behavior problems. Seven questionnaires were used for the evaluation; they were answered by teachers, students, and parents. The following results were found: (1) classroom climate improved in SDP schools; (2) student self-concept improved; (3) classroom behavior and group participation improved; (4) parents' perception of school climate improved; (5) children showed no change in assessments of their own behaviors, while children in the control sample showed a significant negative change in their assessments; and (6) the per cent of days absent decreased. An appendix showing questionnaire results is included. (PS)

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School Development Program

Impact Study

Benton Harbor 1985-1986

Norris M. Haynes, James P. Comer, Muriel Hamilton-Lee

James M. Boger, Edward Joyner

Yale University

Child Study Center

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IMPACT STUDY REPORT

BENTON HARBOR

1985-1986

Introduction

This report summarizes the results of research conducted in the Benton Harbor Area Schools during 1985 and 1986, to measure the sustained impact of the School Development Program.

Sample

The study sample included a total of 313 students in grades K-5 who attended 14 elementary schools. Of the total sample 173 attended 7 School Development Program (SDP) or experimental schools, 91 attended 4 comparable non-program or control schools and 39 attended 3 special schools. All schools were located in low socioeconomic status areas. However, the experimental schools were generally lower achieving schools with more behavior and attendance problems than other schools. The special schools were schools in which specially designed curricular activities occurred. The three special schools included a creative arts academy, a gifted and talented program and a Montessouri program.

The teachers and parents of the 313 randomly selected students were also part of the study sample..

Instruments

A total of seven questionnaires were used in the study. These included student, teacher and parent questionnaires. They were as follows:

Student Measures: (Grades 3-5)

a. Piers-Harris Self-Concept Scale: a measure of the child's self-concept along 6 dimensions. The dimensions are (1) Behavior; (2) Intellectual and

School Status; (3) Physical Appearance and Attributes; (4) Anxiety; (5) Popularity; (6) Happiness and Satisfaction.

b. Classroom Environment Scale: a measure of the child's perception of the classroom climate along 9 dimensions. The dimensions are (1) Involvement; (2) Affiliation; (3) Task Orientation; (4) Competition; (5) Rule Clarity; (6) Innovation; (7) Teacher Control; (8) Order and Organization; (9) Teacher Support.

c. Behavior Description Questionniare: a measure of the child's perception of his/her general conduct.

Teacher Measures:

a. School Survey: a measure of teachers' perceptions of their schools' climate.

b. Teacher Questionnaire: a measure of teachers' assessments of children's non-academic classroom performance along 4 dimensions. The dimensions are (1) Classroom behavior; (2) Group Participation; (3) Attitude twoard authority; (4) General conduct.

Parent Measures:

a. Parent Survey: a measure of parents' assessments of their children's schools' climate.

b. Behavior Description Questionniare: a measure of parents' assessments of their children's behavior.

In addition to the above measures archival data were collected from student records or provided through the evaluation office, on student achievement and attendance.

Design

Pretest data on the above measures were collected in the fall of 1985.

Posttest data on the same measures for the same sample were collected at the end of the school year in the spring of 1986, after one full year of SDP operation in the experimental schools.

The control schools had no special program or activity in place. The special schools, as indicated, had creative arts, gifted and talented and Montessouri programs.

Generally the schools selected for participation in the SDP were the lowest achieving schools with the worst behavior and attendance problems.

Written prior consent was obtained from the parents or guardians of all children who participated in the study. Proper procedures wre instituted to protect the confidentiality of participants. Teachers and parents were also required to provide written assent prior to their participation in the study.

Procedure

The intervention involved was the implementation of the SDP in the 7 experimental schools. A detailed description of this intervention is provided elsewhere (Comer et al 1986).

Analysis

The analysis consisted of T-test procedures to examine whether or not significant changes occurred between pre and posttests on the dependent measures for the three groups of participants (experimental, control, special). The level of significance for rejecting the null hypothesis was set at .05.

Results

The results are discussed according to the respective measures.

Classroom Climate

Significant changes on classroom climate dimensions in a positive direction

were noted for experimental (SDP) schools. The program schools shared significant improvement on students' involvement, students' sense of affiliation, classroom innovation, order and organization and teacher support. One significant negative change was noted on competition. Classrooms in program schools appeared to become less competitive.

Control (Non-SDP) schools showed a significant improvement in task orientation as well as a significant increase in competition, unlike program schools. Special schools showed no significant changes on any of the classroom climate dimensions.

Overall, experimental (SDP) schools showed a significant improvement in classroom climate while the changes in control (non-SDP) and special schools were not significant.

Self-Concept

The experimental sample showed significant improvements on three of the six self-concept dimensions: behavior, school and intellectual status and happiness and satisfaction. The control sample showed a significant decline on the behavior self-concept dimension and no significant changes on the other dimensions. The special sample showed a significant increase on the popularity self-concept dimension and no significant changes on the other five dimensions.

Overall the experimental sample showed significant improvement on self-concept while the control and the special sample showed no significant change.

Teacher Questionnaire

The experimental sample showed significant improvement on the classroom behavior and group participation dimensions. A negative but insignificant change was noted on attitude toward authority. The control sample showed a

significant negative change on group participation and general behavior. The special sample showed no significant changes on any of the teacher questionnaire dimensions.

Overall, the experimental sample showed a significantly positive change on the teacher questionnaire scale while the control and special samples showed no significant change.

Perception of School Climate

Parents in the experimental sample reported a significantly improved assessment of their children's school climate as did parents in the special sample. However, parents in the control sample reported a significantly negative change in their assessments of their children's school climate.

Teachers in the experimental and control samples did not show any significant change in their assessments of their schools' climate, whereas teachers in the special sample showed a significant positive change in their assessments of their school's climate.

Children's Behavior

Children in the experimental and special samples showed no significant change in their assessments of their own behaviors whereas children in the control sample showed a significant negative change in their assessments of their own behaviors.

Parents in the experimental sample showed a significant positive change in their assessments of their children's behavior wheras parents in the control sample showed a significant negative change in the assessment of their children's behavior.

Attendance

Children in the experimental sample showed a significant decrease in the

per cent of days absent while children in the control and special samples showed no significant change.

Achievement

Children in the experimental sample showed a significant improvement in classroom reading grades and no significant change in classroom math grades. Children in the control and special samples showed no significant changes in classroom reading or math grades.

On the California Achievement Test children in the experimental and special samples showed significant gains in grade equivalent units in Reading, Language, Math and the total battery. Children in the control sample showed significant gains in grade equivalent units in Math and the total battery, but not in Reading and Language.

Discussion

Generally, children who were selected from schools where the School Development Program was being implemented showed significant improvement in self-concept, classroom behavior, attitudes, attendance and achievement in classroom reading grades. In addition, significant improvements were noted on children's assessments of their classrooms and parents' assessments of the climate in their children's schools. The control and special samples showed considerably less positive changes in these areas and in some instances the control sample showed significant negative change in desirable areas such as behavior, self-concept,group participation or parents' perceptions of their children's school climate.

These results eloquently attest to the positive impact of the School Development Program on school climate, as well as on student behavior, attitudes and achievement.

The basic premise of the SDP is that positive changes in school climate must occur first and then positive changes in student behavior and achievement will follow. The results of the study appear to support this premise given the highly significant positive changes in climate and student behavior as well as the improvements in achievement.

The lack of significant change in the perceptions of their school climate among teachers in the experimental sample cannot be easily explained, especially in view of the significant positive changes noted by teachers in the special schools. It may be that teachers' expectations for climate change were quite high and were not met within the study period. However, it is important that a significant positive change in their perceptions of school climate occurred among parents in the experimental sample while no such significant changes occurred among parents in the control and special samples. This clearly indicates that the involvement of parents in the process of school improvement at the SPMT level and at the actual implementation level has begun to have positive influence on home-school relations and a beneficial impact on school climate.

Particularly striking were the achievement gains realized among children in all three groups but particularly among the experimental sample. Children in the experimental sample were the lowest achieving but showed the most significant gains in all areas.

Students in the control sample failed to improve significantly in Reading and Language. These data provided further support for the effectiveness of the School Development Program, not only in enhacing school climate but in also improving academic achievement among students.

APPENDIX A

INSTRUMENTS

APPENDIX B

TABLES 1-3

Table 1
Mean Changes on Dependent Measures for School Development Program
Sames - Experimental

	1985 $\bar{x}$	1986 $\bar{x}$	$\bar{x}$ Change	$S\bar{x}$	t	Sig.
Classroom Climate						
Involvement	.89	1.5	.61	.09	6.8	.000*
Affiliation	1.1	1.4	.3	.07	4.3	.000*
Task Orientation	1.2	1.2	.0	.06	0	1.00
Competition	1.1	.94	- .17	.06	2.8	.000*
Role Clarity	1.5	1.5	0	.10	0	1.00
Innovation	.40	1.3	.9	.11	8.2	.000*
Teacher Control	1.2	1.3	.1	.07	1.4	.07
Order and Organization	.40	1.3	1.1	.09	10.0	.000*
Teacher Support	.40	1.3	.9	.09	10.0	.000*
Total	.91	1.3	.39	.09	4.3	.000*
Self-Concept						
Behavior	8.0	8.9	.9	.37	2.4	.015*
School	7.8	9.2	1.4	.41	3.4	.001*
Physical	5.9	6.3	.4	.35	1.1	.175
Anxiety	3.9	4.3	.4	.30	1.3	.179
Popularity	2.6	3.2	.6	.31	1.9	.077
Happiness and Satisfaction	4.0	4.6	.6	.31	2.0	.053*
Total	5.0	6.1	1.1	.31	3.5	.000*
Teacher Questionnaire						
Classroom Behavior	50	53.7	3.7	.90	4.1	.000*
Group Participation	19.6	24.5	4.9	.93	5.3	.000*
Attitude to Authority	24.5	23.8	.7	.98	.71	.510
General Behavior	28.2	29.0	.8	1.4	.57	.56
Total	31.0	32.8	1.8	1.0	2.0	.053*
Parents' Perceptions of School Climate	1.2	1.8	.6	.09	6.8	.000*
Teachers' Perceptions of School Climate	2.0	2.1	.1	.10	1.04	.299
Childrens' Behavioral Self-Assessment	.66	.63	-.3	.03	1.2	.234
Parent's Assessments of Children's Behavior	.68	1.0	.32	.05	6.9	.000*

Table 1
Mean Changes on Dependent Measures for School Development Program Sample - Experimental

	1985 $\bar{x}$	1986 $\bar{x}$	$\bar{x}$ Change	$S\bar{x}$	t	Sig
Percent Days Absent	33.2	29.0	4.2	2.1	2.0	.047*
Achievement						
Classroom Reading Grade	1.8	2.0	.2	.06	3.3	.010*
Classroom Math Grade	1.6	1.6	0	.57	0	1.00
Reading Grade Equivalent	2.0	2.5	.5	.05	10	.000*
Math Grade Equivalent	2.3	3.1	.8	.06	13.3	.000*
Language Grade Equivalent	2.3	2.8	.5	.08	6.3	.000*
Total Battery	2.1	2.8	.7	.05	14.0	.000*

Note N=176 df=175

Table 2
Mean Changes on Dependent Measures for Non-School Development Program Sample - Coantrols

	1985 $\bar{x}$	1986 $\bar{x}$	$\bar{x}$ change	$S\bar{x}$	t	Sig
Climate						
Involvement	.96	.86	− .10	.08	1.3	.23
Affiliation	2.0	2.0	0	.12	0	1.00
Task Orientation	1.5	1.9	.4	.11	3.6	.001*
Competition	1.1	1.3	0.2	.11	1.8	.05*
Rule Clarity	1.9	2.0	.1	.10	1.0	.29
Innovation	1.5	1.5	0	.14	0	1.00
Teacher Control	1.6	1.7	.1	.11	.91	.16
Order and Organization	.52	.44	− .08	.09	.89	.42
Teacher Support	.55	.52	− .03	.04	.75	.57
Total	1.3	1.4	.1	.10	1.0	.29
Self-Concept						
Behavior	8.7	7.7	-.97	.42	2.3	.02*
School	8.1	8.9	.8	.48	1.7	.09
Physical	6.3	6.0	− .3	.48	.63	.55
Anxiety	5.8	6.2	.4	.48	.65	.46
Popularity	4.9	5.2	.3	.44	.68	.37
Happiness and Satisfaction	4.2	3.6	− .6	.51	1.2	.23
Total	6.3	6.3	0	.47	0	1.00
Teacher Questionnaire						
Classroom Behavior	50.0	51.9	1.9	3.5	.56	.54
Group Participation	22.7	19.5	-3.2	1.6	2.0	.04*
Attitude Toward Authority	23.8	26.7	2.9	1.7	1.7	.09
General Behavior	32.3	26.3	-5.0	2.3	2.2	.03*
Total	32.0	31.1	- .9	2.3	.39	.40
Parents' Perception of School Climate	1.9	1.1	− .8	.14	5.9	.000*
Teachers' Perceptions of School Climate	2.1	2.4	.3	.17	1.5	.14
Childrens' Behavior Self-Assessment	.96	.84	− .12	.04	2.9	.005*
Parents' Assessments of Childrens' Behavior	1.1	.58	.52	.08	5.9	.000
Percent Days Absent	30.5	33.2	2.7	4.2	.66	.511

Table 2
Mean Changes on Dependent Measures for Non-School Development Program Sample - Control

	1985 $\bar{x}$	1986 $\bar{x}$	$\bar{x}$ Change	$S\bar{x}$	t	Sig
Achievement						
Classroom Reading Grade	1.9	1.9	0	.58	0	1.00
Classroom Math Grade	1.6	1.7	.1	.73	16	.726
Reading Grade Equivalent	2.5	4.1	1.6	.89	1.8	.065
Math Grade Equivalent	3.8	4.5	.7	.26	2.7	.010*
Language Grade Equivalent	3.3	4.0	.7	.39	1.7	.098
Total Battery	2.9	3.6	.7	.17	4.1	.000*

Note N=91 df=90

Table 3
Mean Changes on Dependent Measures for Nonschool Development Program Sample - Special

	1985 $\bar{x}$	1986 $\bar{x}$	$\bar{x}$ Change	$S\bar{x}$	T	Sig.
Classroom Climate						
Involvement	1.4	1.4	0	.16	0	1.000
Affiliation	2.0	2.0	0	.16	0	1.00
Task Orientation	1.9	1.9	0	.20	0	1.00
Cooperation	1.2	1.5	.3	.17	1.7	.102
Rule Clarity	2.0	2.0	0	.17	0	1.00
Innovation	2.0	2.0	0	.21	0	1.00
Teacher Control	1.6	1.8	.2	.12	1.3	.21
Order and Organization	.62	.59	− .03	.14	.18	.865
Teacher Support	.64	.67	.03	.05	.57	.57
Total	1.5	1.5	0	.15	0	1.00
Self-Concept						
Behavior	9.2	9.4	.2	.68	.30	.776
School	8.9	9.3	.4	.78	.43	.672
Physical	6.9	6.1	− .8	.72	1.24	.223
Anxiety	6.5	6.2	− .3	.65	.48	.64
Popularity	4.3	5.9	1.6	.75	2.1	.041*
Happiness & Satisfaction	5.3	5.4	.1	.74	.14	.891
Total	7.1	6.8	− .3	.62	.48	.64
Teacher Questionnaire						
Classroom Behavior	56.5	63.1	6.6	4.7	1.4	.168
Group Participation	22.2	25.0	2.8	1.7	1.6	.111
Attitude to Authority	28.6	30.2	1.6	2.6	.62	.549
General Behavior	36.8	40.5	3.7	3.1	1.2	.232
Total	40.8	39.7	− 1.1	3.0	.36	.71
Parents' Perception of School Climate	2.3	2.0	− .3	.15	1.9	.053*
Teachers' Perception of School Climate	2.3	2.9	.57	.18	3.2	.002*
Children's Behavior Self-Assessment	1.0	1.0	0	.08	0	1.00
Parents' Assessments of Children's Behavior	1.3	1.1	− .2	.08	2.0	.06
Percent Days Absent	23	20	− 3	4.8	.54	.59

Table 3 (Continued)

	1985 $\bar{x}$	1986 $\bar{x}$	$\bar{x}$ Change	$S\bar{x}$	T	Sig.
Achievement						
Classroom Reading Grade	2.7	2.7	0	.74	0.0	1.00
Classroom Math Grade	2.3	2.3	0	.13	0.0	1.00
Reading Grade Equivalent	3.5	4.3	.8	.16	5.0	.000*
Math Grade Equivalent	3.4	4.3	.9	.15	6.0	.000*
Language Grade Equivalent	4.3	5.1	.8	.27	3.0	.004*
Total Battery	3.6	4.3	.7	.19	5.0	.000*

Note: N=39 df=38

REFERENCES

Comer, J.P., Haynes, N.M et al (1986). Academic and affective gains from the school development program: A model for school improvement. (ERIC Research Document Number 274 750).